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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,792	12/31/2003	Muraleedhara Herur Navada	10559-907001 / P17955	5367
20985 7590 11/26/2007 FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER NGO, NGUYEN HOANG	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 11/26/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/749,792

Applicant(s)

NAVADA ET AL.

Examiner

Nguyen Ngo

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 21-23, 27-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 21-23, 27-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

This communication is in response to the amendment of 9/17/2007. All changes made to the Claims have been entered. Accordingly, Claims 1-14 and 21-23, and 27-31 are currently pending in the application.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 7, 14, 30, 31 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

It should be noted that nowhere in the specification does it disclose "modifying the vector". Applicant is encouraged to point out such limitations.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-14 and 21-23, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weyman et al. (US 20030147412), in view of Abali et al. (US 5721820), hereinafter referred to as Weyman and Abali.

**Regarding claim 1, 6, 8, 13, 21, 29,** Weyman discloses a method comprising:

receiving a packet at a packet forwarding device (unit 0) in a stack of packet forwarding devices (seen from figure 1), wherein the packet is received from a source device external to the stack (a packet entering (from external device) the stack and requiring routing is routed by the unit that receives the packet, abstract);

at the packet forwarding device that received the packet (lead router) from the source device, processing the received packet to (page 1 [0008] and page 2 [0025]):

identify a destination device external to the stack of packet forwarding devices (egress port (into an external device from the stack) is on a different unit, after routing the packet will be forwarded by bridging to the unit owning the port, page 2 [0025]), and

determine whether at least one other packet forwarding device is to receive the packet before reaching the identified destination device (determine if egress port is on different unit, page 1 [0008]);

Weyman however fails to specifically disclose when detecting that the at least one other packet forwarding device in the stack is to receive the packet before reaching the identified destination device, inserting a vector in the received packet, wherein the vector includes data that identifies the identified destination device and the at least one other packet forwarding device in the stack of packet forwarding devices to receive the packet. Weyman however discloses that only the lead router need run a full routing protocol, and that any routing protocol is appropriate (page 3 [0040]). Abali further discloses of a source routing protocol in which the packet route information (inserting vector which includes data that identifies the identified destination device and the at least one other packet forwarding device) is embedded into the packet by the source node (lead node) and that the source processor (lead node) determines the route and encodes the routing instructions in the packet header and that each word in the header indicates a switch port (id for destination device and at least one other packet forwarding device) to forward the packet to (col1 lines 25-65 and figure 2-4). It would have thus been obvious to incorporate the concept of source based routing in which insert routing information (vector) into a packet as disclosed by Abali into the method of

routing data through stacked network routers as disclosed by Weyman in order to correctly and efficiently communicate data through a stacked routers.

**Regarding claim 2, 9, 22,** the combination of Weyman and Abali, more specifically Weyman discloses using the inserted vector and a table to determine a port for sending the received packet to the at least one other packet forwarding device in the stack of packet forwarding devices (routing tables, page 2 [0022]).

**Regarding claim 3, 10, 27,** the combination of Weyman and Abali fails to specifically disclose copying the packet and sending the copy of the received packet through the at least one other packet forwarding device in the stack of packet forwarding devices. Weyman however discloses of a checksum for the packet (page 2 [0022]) and it is further well known in the art of transmission errors. It would have thus been obvious to a person skilled in the art at the time the invention was made to copy the packet for sending in order to ensure proper transmission of a packet.

**Regarding claim 4, 11, 28,** the combination of Weyman and Abali, more specifically Abali discloses wherein inserting the vector comprises inserting the data that includes a data bit identifying each of the at least one other packet forwarding device in the stack of packet forwarding devices to receive the packet (each word indicates a switch port and as the message packet proceeds in the network, each switch examines the first

word and forwards the packet through the indicated output port (another router to receive the packet), col1 lines 45-60).

**Regarding claim 5, 12, 23,** the combination of Weyman and Abali, more specifically

Abali discloses the method of claim 1 further comprising:

removing the inserted vector from the received packet before for sending the packet to the destination device external to the stack of packet forwarding devices (the switch also strips off the first word before forwarding the packet to the next level in the network. Thus the packet contains no routing information upon arriving at its ultimate destination, col1 lines 59-65).

**Regarding claim 7, 14, 30, 31,** the combination of Weyman and Abali fails to

specifically disclose modifying the vector to identify which of the at least one other packet forwarding device has already received the packet. Abali however disclose stripping off words (removing data bits identifying packet forwarding devices in a stack) before forwarding the packet to the next level, (col1 lines 59-65). It would have thus been obvious to a person skilled in the art to modify the vector (instead of removing bits in the vector as disclosed by Abali) in order to correctly portray the path that a packet has taken through a stack of routers.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Brown (US 20050147113), Method and Apparatus For A Four-Way Hash Table.

b) Greaves et al. (US 6111858), Proxy-Controlled ATM Subnetwork.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

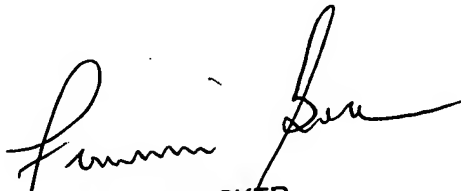
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571)272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.N.  
\*\*\*  
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**FIRMIN BACKER**  
**SUPERVISORY PATENT EXAMINER**

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